

WHAT IS CLAIMED IS:

1 1. A data storage system including two or more storage devices that are
2 remotely coupled to each other, comprising:
3 at least two host devices coupled together by a network interface;
4 at least two data transfer interfaces, each of which corresponds to one of the
5 host devices;
6 at least two storage devices, each of which is coupled to one of the host
7 devices, and which are coupled to each other by a remote copy interface, and which have
8 duplicated determining volumes respective; and
9 a determination function of using the determining volumes in competition for
10 an exclusive usage right among said host devices when a failure occurs in the network
11 interface or the host device.

1 2. The data storage system according to claim 1, further comprising:
2 an exclusive control function that controls the determining volumes to
3 determine one of the host device exclusively.

1 3. A data storage system including at least two storage devices remotely
2 coupled to each other, comprising:
3 at least two host devices coupled by a network interface to each other, and
4 having respective paired volume control software;
5 at least two data transfer interfaces, each of which correspond to one of the
6 host devices;
7 at least two storage devices, each of which is coupled to one of the host
8 devices, and which are coupled to each other by a remote copy interface, and which have a
9 commonly-used paired volume made by the remote copy interface;
10 a first function for forwarding a reserve command issued from one of the host
11 devices to exclusively use the paired volume, by way of said paired volume control software,
12 toward the storage device; and
13 a second function for receiving a normal end response from the storage device
14 corresponding to the reserve command, for issuing a command for controlling the paired

- 15 volume toward the storage device, and for issuing a transition command for changing an
- 16 attribute of said paired volume;
- 17 wherein the data storage system determines the host device that is received
- 18 with the normal end response, as only one host device to access the paired volume.